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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

Not for publication without
prior consent of this division.

REPORT FOR THE WEEK ENDING MAY 4, 1935.

HAVRE:

The week was cool. There were five days when the minimum temperature was freezing or below, and the maximum was only 63°. Conditions were favorable for field work throughout the week, and seeding progressed rapidly. All small grains are in, and seed bed is being prepared for flax and corn. None of the regular seeding of small grains is up. Domestic grasses are growing fairly well and would make good pasture. Native grasses are green, but temperatures have been so low that the growth is very short. Grazing has very little value as yet. Irrigation of alfalfa was completed, and all large fields of feed were seeded. Winter grains are growing very nicely with practically no winter injury.

Visitors during the week included Dr. J. R. Parker, Robert Shotwell and Fred Morton, all of the Bureau of Entomology, and Mr. White of the Canadian Bureau of Entomology. These gentlemen were making a survey of the grasshopper egg situation in this locality. Their results indicate only a mild infestation of grasshoppers for this year.

Maximum temperature, 63°; minimum, 28°; precipitation, 0.11 inch.
April precipitation, 1.20 inches; January - April precipitation, 2.53 inches.

JUDITH BASIN:

Although the weather during the past week has been unseasonably cool with a few snow flurries, field work has gone forward without delay. Only flax remains to be seeded in the rotations. Practically all seeding on the Cereal and Forage projects has been completed. Crested wheatgrass was the only crop that made any appreciable growth during the week. Winter wheat seems to be standing still and evidently has suffered more winter injury than was first apparent.

The mean temperature of 31.8° for April was the lowest ever recorded for that month. This low mean temperature together with the low precipitation of 0.48 inch during the month explains the backward condition of all crops on May 1.

Maximum temperature, 62°; minimum, 23°; precipitation, 0.15 inch.

HUNTLEY:

Most of the days during the last week have been bright but cold and somewhat windy. One measurable sprinkle of rain was received and traces occurred on three other dates. Spring growth of all plants appears to have been retarded by the cool weather, and crops have made little advancement over their condition of a week ago. On a few plots the first shoots of spring grain are showing above the ground, but it is too early to determine the extent of germination.

The preparation of land for corn has gone forward throughout the week. Seed beds on some of the heavier soil will be cloddy, owing to the land having been worked when a little too wet, but on most plots the ground is in excellent condition. Some miscellaneous plantings of grains and grass were made early in the week.

Maximum temperature, 67°; minimum, 17°; precipitation, 0.02 inch.

SHERIDAN:

Cool weather, partly cloudy and with some wind at times prevailed over the entire week, with no precipitation of consequence. Vegetative growth generally was slow. Grass and fall sown grain continue in good condition but grow very slowly. Alfalfa remains in about the same condition as a week ago, with no growth of consequence. This condition seems general over this section whether on irrigated or dry land. The first date of seeding small grain emerged early in the week, and the varieties the last of the week.

All seeding supposed to be done early was completed. The rotations were plowed for corn and sorgo, and all fall plowing and fallow not yet seeded was duckfooted. Much of the ground still plows quite sticky but works up fairly well, better than usual for spring plowing. Shelter-belt stock was planted at intervals as help was available, but some still remains to be planted. Fruit stock was planted under the direction of Dr. Hildreth from Cheyenne.

The mean temperature for April was the lowest recorded here since 1920. Precipitation for the month was 0.40 inch below the station average, and 0.39 inch below that of last year. Precipitation for the year to the last of April is 0.03 above that of last year, but 0.75 inch below the station average.

Maximum temperature, 65°; minimum, 25°; precipitation, 0.22 inch.

MANDAN:

Agronomy - Field work has been delayed during the week because of wet fields. Precipitation has been recorded on five days during the week. On the 25th, 1.05 inches fell. This was the greatest amount for any 24-hour period in April since 1921. The total precipitation for April was 3.09 inches. This was the greatest amount for April since 1894 in this vicinity. The 20-year (1914-1933) average for this station for April is 1.37 inches. The 60-year average for this vicinity is 1.57 inches. The total precipitation for the four months is 4.71 inches, compared with the 20-year average of 2.83 inches and 1.32 inches in 1934. The 60-year average for the same period is 3.39 inches. The total precipitation for the first three days of May is 0.99 of an inch compared with 0.17 in May 1934. Snow fell on the morning of the 4th.

April was below normal in mean temperature. The only field work done during the week was plowing corn and sorgo blocks, seeding a block of barley for feed, and seeding a small block of crested wheatgrass. Wheat that was planted two weeks ago is just coming up.

Crested wheatgrass is now large enough to furnish grazing.

Maximum temperature, 49°; minimum, 30°; precipitation, 2.53 inches.

Horticulture - The past rains have been very beneficial to all horticultural plantings. Many trees will now recover, that might have died with a further continuance of the drought. Buds of fruit trees are now starting growth. Pruning and raking of brush has been in progress as the weather permitted. The pruning is now finished. Top-working of apple trees has been started. It has been decided to pull out the Whitney crabs in the pruning experiment and replace them with some other variety, as drought has killed or injured many of the trees and the plots are no longer uniform.

Arboriculture - All surplus seedlings of green ash, chokecherry, honey locust, and American elm have been lined out in the transplant field. Transplanting of conifer seedlings is now in progress. The precipitation during the week should ensure good stands of seedlings from seed and stock which has been transplanted.

Visitors - Dr. G. J. Worner, and Dr. E. B. Simonds, Bureau of Animal Industry; Paul H. Roberts, Director, F. E. Cobb, State Director, D. S. Olson, L. F. Cottam, C. E. Fifield, C. R. Towne, National Shelterbelt, U. S. Forest Service.

ARCHER:

After the snow storm which started April 23 and ended April 25, mild weather continued until the night of April 28 when a severe cold snap followed a flurry of snow. The temperature dropped to 7°, and since this date the weather has been cold and threatening. The total precipitation for April was 2.60 inches and for January - April 3.37 inches, or 0.76 of an inch more than the 22-year average. Due to the drifting of the snow the depth of soil moisture varies from 8 inches to more than 2 feet. Under average field conditions the depth averages between 18 inches and 2 feet.

Vegetation has made but little growth. Most of the leaves of the shrubs that had started to grow were frozen, and grass, for the most part, is making but very little showing. Crops seeded before the storm have not made expected progress. Work with the one-way and duckfoot was started May 3.

Director W. L. Quayle visited the station April 30.

Maximum temperature, 48°; minimum, 7°; precipitation, 0.28 inch.

AKRON:

Some field cultural work was possible by the middle of this week, following the heavy precipitation reported last week. Rotation and rate and spacing project winter wheat plots were seeded to spring grains in order to have small grain stubble preparation for succeeding crops in the rotation. It was highly problematical all spring, but by May 1 it was definitely certain that there would not be more than 10 per cent stand on the very best of these plots. Other work was to take up the preparation of the rotation corn and sorghum plots where it was interrupted by the recent heavy precipitation.

The winter wheat variety experiment shows excellent and fair stands on fallow and on corn-land, respectively. The station has one 2-acre increase plot of Kanred that escaped the ravages of the rabbits. Nursery also promises fair to medium stands. Otherwise the station's cereals will be spring sown. Winter wheat on fallow here on the station would undoubtedly have come through in good condition if it had not been for the unpreventable digging-up of the plants by rabbits.

Rainfall to May 1 now stands at 4.71 inches as against the average of 3.68 inches. March and April both exceeded the average for those months. To date there has been no loss of fallen moisture from run-off.

Maximum temperature, 68°; minimum, 28°; precipitation, 0.15 inch.

NORTH PLATTE:

The week has been unseasonably cold, unsettled, and disagreeable. The worst dust storm of the season occurred on April 30. Only a small amount of dust was picked up locally. Dense clouds of reddish brown dust came in on a strong southwest wind. Visibility was only a few hundred feet, and lights on cars and in buildings were burned all afternoon. Mail planes flew above the dust clouds and did not attempt to land at North Platte, which was about the center of the storm path.

April mean temperature of 46° was 3° below normal and only 3° above the mean for March this year. The normal difference between the two months is 12°. April precipitation of 4.45 inches on the bench and 5.06 on the table, made the month the second wettest April in the 28 years of station records, wiped out the deficit of the previous months, and left an excess of a little over 2 inches for the year to date. May to date has made a poor start in carrying out the forecast for excess temperatures.

COLBY:

This has been a rather disagreeable week. Most of the time it was windy and dusty, and the rest of the time it was cold. Although it has been cloudy nearly every day, only a trace of moisture fell on two different days. The last day of the month was windy, dusty, and almost dark all day with very serious soil blowing all day and nearly all night. It was the worst day for soil blowing we have had. We removed 20 pounds of soil from this one office room the next day. May 1 was a continuation of the day before, but not nearly so bad.

The lister furrows in the alleys and along the edges of the roadways were opened up again this week to help keep soil blowing in check on the D. L. A. project. The ridges made by the furrow drill on nearly all the plots in April are taking care of the soil blowing very satisfactorily so far. Spring sown small grains have germinated only in spots where snow had drifted.

Maximum temperature, 74°; minimum, 33°; precipitation, trace; April precipitation, 0.29 inch; January - April precipitation, 0.93 inch.

HAYS: (Report for the week ending April 27, 1935)

The week has been characterized by frequent dust storms, the most severe of which occurred on April 21, 22, 25, and 26. Winter wheat continues to suffer severely from lack of moisture in the soil and unfavorable climatic conditions overhead. Spring wheat, barley, oats, and field peas were seeded April 23, after a delay of six weeks beyond normal seeding date hoping for more favorable conditions. The seed was covered to normal depth with dry soil.

The annual Boys and Girls judging contests were conducted on the Experiment Station yesterday and the Annual Round-Up program is in progress to-day, the 27th. Despite a severe dust storm Friday there were present 106 judging teams. To-day the attendance probably does not exceed 300, but the interest is very good. The results of the feeding experiments, including the use of Russian thistles alone and together with other feeds in winter rations, are attracting considerable attention.

Maximum temperature, 87°; minimum, 39°; precipitation, trace.

HAYS:

There is little to say for Hays this week, except that the 7-months drought and the 3-months dust storms continue. To-day, May 4, is the first quiet day free from dust this week. Most of the time visibility has not exceeded one mile. For several hours at a time visibility ranged between 200 feet and 1/4 mile, and occasionally it was reduced to practically zero. The soil on the station fields and plots continues to hold.

Winter wheat continues to deteriorate. The surviving wheat on cropped land is now beginning to develop widely scattered seedstalks, the tallest of which are about 6 inches. The wheat on the 3-year fallow still looks promising for a crop. The stand is good and the growth uniform at 6 inches. It is questionable, however, what effect the 2-inch deposit of fine wind-carried soil on the plot may have on the wheat.

Total precipitation on the project for the month of April was 0.16 inch. The total precipitation for the past seven months by the Weather Bureau readings on the station is 1.73 inches. Trees along the streams are slowly developing leaves. Cherry trees are passing out of the bloom stage. Spirea is slowly coming into bloom. Buffalo grass is still dormant. Alfalfa on upland is dormant, on bottom land it is 4 to 6 inches high in best spots, bare in other spots. The feed problem is becoming extremely critical.

Maximum temperature, 82°; minimum, 38°; precipitation, trace.

GARDEN CITY:

Garden City remains in the continuously diminishing area of the Plains that has received no significant rain this spring. Very dark to almost black dust clouds have not occurred this week, probably due to rains in Northern Kansas, Nebraska and Colorado, also due to less rapid wind movement.

E. F. Chilcott visited the station on April 28 and 29, which fortunately were two of the clearest days in April.

Maximum temperature, 79°; minimum, 31°; precipitation, 0.01 inch.

TUCUMCARI:

Snow which began yesterday, Friday, morning at 9 o'clock continues to fall, with precipitation at 8 o'clock this morning totaling 0.89 inch. Snow now covers the ground to a depth of 6 inches, the most seen at any one time in this vicinity in four years. Since August 1933 precipitation totaling one-half inch or more has fallen on only four days, including this present snow.

Reports indicate the storm is covering considerable territory, being of untold value to farmers and ranchers. What little wheat survives should be greatly helped, grass should at last start; and field work can now progress without the necessity of changing lister points each half day on hard, baked soil.

Maximum temperature, 82°; minimum, 30°; precipitation, 0.89 inch.

DALHART:

Weather conditions remained dry, windy and disagreeable, as throughout the past 12 weeks. Trees are far enough leafed and with spring growth sufficient to show a lack of vitality necessary to recovery of many trees in the drier locations. Desert Willow are leafing out about 10 days ahead of normal. Rye for a cover crop in mature trees is dead but furnishes protection. A light snow starting Friday afternoon and lasting 36 hours gave a total of 0.25 inch.

BIG SPRING:

This has been a week of changing weather conditions varying from normal spring weather to dust storm to rain and cold weather. The night of May 4, 0.42 inch of rain was received accompanied by a cold northeast wind, which dropped the temperature to 39°. This cold weather is not conducive to cotton growth, and probably will cause much recently planted seed to rot rather than germinate.

Wheat, which was beginning to suffer considerably, will be revived temporarily, but it will require more rain before grain can be produced.

Station work has consisted of spring-tooth harrowing the rotation plots and staking them off for planting. The field for the cooperative work was also harrowed and staked for planting. Other work has consisted of knifing beds in the increase fields and planting Sudan grass.

Maximum temperature, 90°; minimum, 39°; precipitation, 0.42 inch.

LAWTON: (Report for the two weeks ending May 4, 1935)

Three showers April 24 - 28, amounting to 0.68 inch provided temporary relief for small grain crops and assisted in the preparation of seed beds for row crops. However, several windy days cut this period of moisture improvement rather short.

A rain accompanied by a cold, north wind begun during the night of May 3 and continued all day the 4th. The 2.13 inches recorded during this period was largely soaked up by the soil, and but little run-off water reached the farm ponds that are, in many instaces, quite low. This is the first rain of soaking consequence that has been received since November 14 to 21, 1934. The 1.42 inches of precipitation in April was 1.61 inches below the monthly normal and brought the rainfall deficit for the first four months up to 2.40 inches. During the past two weeks the minimum temperatures ranged from 41° to 60° and the maximum from 43° to 85°.

Most of the wheat varieties were pretty fully headed by May 1, and the rotation plots of wheat were showing the first heads at that time. Oats were 25 to 75 per cent headed. Present moisture conditions should make a fair to good oat crop quite probable. Some of the wheat will benefit very measurably, but the crop as a whole cannot bring much but disappointment and plenty of grief in harvesting.

The rotation corn plots were thinned to a 30-inch stand May 3, and the crop is now in excellent condition to make a very rapid growth with the advent of warmer weather.

Cotton planted April 23 emerged to good stands May 1, but the present temperatures of 41° to 43° are far too low for the young seedlings. Kafir, sorgo, feterita, and cowpeas were planted in rotation plots April 30 to May 2. Sweet clover and alfalfa, planted April 23 is emerging to some extent, but both crops will have severe competition from crabgrass and weeds. Four and one-half acres of sweet clover, in paired rows, was seeded April 29. Two-year-old sweet clover is blooming and should produce a good seed crop. The first cutting of alfalfa on creek bottom farms was very light, and on the upland fields the production of hay was a failure.

WOODWARD:

The early part of the week the sun was almost constantly obscured by dust clouds and the latter part of the week by rain clouds. However, no rain occurred until to-day a slight drizzle has been falling which may develop into a steady rain. Station work for the week consisted of miscellaneous planting of nursery stock and seed, hauling brush, grubbing trees, sprouting grapes, and some field cultivation preparatory to spring planting.

Maximum temperature, 89°; minimum, 38°; precipitation, none.

PENDLETON:

Moderate weather prevailed all week, and crops in this section are in fine condition. Frost on the 27th injured the tips of some of the tender wheat and barley in exposed spots over the county. Rotation corn was planted this week. Sheep shearing over the county is in progress.

Maximum temperature, 67°; minimum, 28°; precipitation, 0.05 inch; precipitation for April, 2.14 inches.

BELLE FOURCHE:

Cold, cloudy, windy weather prevailed throughout the week. The temperature fell below freezing nearly every night, and severe killing frosts occurred April 28 and May 3. Early seeded barley was frozen back to the ground, but owing to the backwardness of the spring very few crops or plants were sufficiently far advanced to be injured. A light rain May 1 was of little value except to hold the soil in place during the high wind which accompanied it. A total of 3.11 inches precipitation has been received to date in 1935, which is approximately 0.40 inch below normal. The precipitation for April was 0.77 inch below the 27-year average for the month, and only 0.13 inch has been recorded during the past 25 days.

The surface soil has become too dry to permit the germination of shallow seeded crops, and much of the small grain and other deeply planted seed will not germinate until after a good rain is received. The cold weather has caused all plant growth to be backward, and crops made very little advancement during the week. Field work included the plowing and disking of the various corn plots, and the seeding of alfalfa and grass varieties.

A. C. Hildreth, Cheyenne, Wyo., Station, was a visitor on May 4.

Maximum temperature, 63°; minimum, 19°; precipitation, 0.11 inch.

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NOTE: PRESS RELEASE FOR MAY 16, 1935.

Several discoveries of special interest to farmers have resulted during the past year from investigations of farm fires caused by spontaneous combustion of hay and other farm products. Most surprising of these is the apparent connection of recent dust storms in Texas with the loss of stacked sorghum on a number of farms in that State. Dr. Price, Bureau of Chemistry and Soils, said that during the investigation of an explosion of kafir corn dust in a grain elevator in the Southwest, one of the local officials reported that many of the piles of grain sorghum in that vicinity which had been covered and weighted with wires, for protection against the wind, had caught fire when a swirl of wind-borne dust passed over them, and that farmers in that territory were forced to ground these wires to prevent their stacked sorghum from igniting by static electricity.

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MAY 28 1935
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REPORT FOR THE WEEK ENDING MAY 11, 1935.

HAVRE:

Field work the past week was interrupted by snow and rain amounting to 0.40 inch, recorded on the 6th and 7th. Temperatures generally were low with a minimum of 32° or less on three days. Winter grains are growing, but only the early seeded spring grains are up. Domestic grasses have made a fairly good growth, but native grasses are still short for good grazing. Alfalfa generally is growing nicely. Some irrigated fields that have not been irrigated are starting rather slowly. Seed-bed preparations for later seedings such as corn and flax were completed during the week. The remainder of the cattle feeding experiments were completed during the week, and all cattle are now on grass. Some of the early leaves are beginning to show, including wild currants, gooseberries and boxelders. A few junipers and Mugo pines were received from the nursery at Missoula.

Director F. B. Linfield and Professor F. M. Harrington of the Experiment Station were visitors on the 10th.

Maximum temperature, 70°; minimum, 30°; precipitation, 0.45 inch.

JUDITH BASIN:

Cold showery weather during the week just closed again delayed plant growth and interrupted field work. Grain seeded two weeks ago is beginning to emerge. Winter wheat continues to grow slowly, and most fields are heavily infested with weeds of the winter annual type. These weeds are making a good growth despite the cold weather and will no doubt inhibit the growth of the wheat.

The winterkilling of alfalfa appears to be greater this spring than at any time in the history of the station. About half of the commercial fields on the station are a total loss, and the remainder are very weak. Such varieties as Ladak have not suffered any killing and are starting off nicely. Apparently the combination of several successive years of drought together with subzero temperatures without snow cover has been too much for all except the most hardy varieties. Slender wheatgrass, especially that seeded prior to 1930, has also suffered heavy winterkilling.

Maximum temperature, 66°; minimum, 26°; precipitation, 0.64 inch.

HUNTLEY:

The week has been moderately cool with cold rains and rather high wind movement. One rain amounting to 0.55 inch was mostly torrential in character, beat down seedling flax and grasses, and resulted in a high percentage of run-off from sloping fields. Due largely to cool weather, crops have made little growth through the week. Fall-sown grains, alfalfa, and grasses appear to be in need of moisture as well as favorable temperatures before marked growth can be made.

Following a shower early in the week, all corn-land was reworked, and the clods resulting from spring plowing while some of the soil was too wet were reduced to fair seedbeds. All roads were lined out, and plots were staked for corn planting. A few cutworms appear throughout the grain plots, but as yet no injury to the plants has been seen. Grasshoppers are starting to hatch in small numbers in favorable

locations.

Maximum temperature, 70°; minimum, 28°; precipitation, 0.93 inch.

SHERIDAN:

The weather continued cool throughout the week, with no precipitation of consequence. Growth of all vegetation continues slow. Wheat and barley in the rotations emerged during the week, and oats are beginning to emerge. Alfalfa is showing up better than last week, but it has made little growth yet. The stand of all alfalfa has been thinned to some extent by killing out.

Sheep were placed on pasture, except the lot to go on rye. The rye has not made growth enough to furnish feed for any time, and the lot to go on that crop was placed in Field O on native grass until the rye has made sufficient growth. The lot of pigs to go on rye was placed on the pasture, the rye in that field having made a better growth. The remainder of the pigs were held in the dry lot, until the alfalfa has made some growth.

Flax was sown in the rotations and varieties. In spite of the lack of rain there has been little evaporation from the surface and except for some of the spring plowed plots, which dried rather lumpy, surface conditions still remain good for seeding. Soil samples were taken.

Maximum temperature, 68°; minimum, 26°; precipitation, 0.35 inch.

DICKINSON:

Cool and cloudy weather prevailed most of the week. Rainfall amounted to 1.58 inches. The land was too wet for field work nearly half of the time. Precipitation to date in May amounts to 2.01 inches, and during the past 15 days 3.61 inches has been recorded. Cool weather delayed development of most vegetation. No bloom has yet opened on any of the fruits or shrubbery. The season seems to compare best with 1927 when plums were in full bloom on May 18. During the past few hot years fruit was usually through blooming before this date. Wheat, oats, and barley, seeded on the rotations April 17 and 18, emerged May 5 to 8. Alfalfa, sweetclover, flax, and millet were planted on the rotations. All alfalfa and sweetclover plots had to be seeded.

The wet, cool weather was favorable for the establishing of about 500 Colorado blue spruce received last week from the Northern Great Plains Field Station. Most of these were placed in the shelterbelt just north of the buildings, after pulling the few ash and boxelder remaining in this belt.

Some wheat is still being seeded by farmers in the locality, although the better farmers had completed seeding a week ago. As a result of a wet, cool season more flax is being seeded than during the past few years. The acreage of this crop is not large, however.

Mr. Stewart and party of three assistants of the Bureau of Agricultural Economics visited the station May 10.

Maximum temperature, 64°; minimum, 30°; precipitation, 1.58 inches; precipitation to date in 1935, 6.04 inches.

MANDAN:

Agronomy -. The past week has been cool, cloudy, and rainy, just the reverse of last year. Rain was recorded on four days during the week. Field work was delayed because of wet ground. Grass species

were seeded in the Erosion Control Nursery. Alfalfa was seeded in rotation 42, and a block of bromegrass was seeded. The delayed seeding of wheat was made, and an early planting of corn was put in. Plowing was completed on blocks for corn. Small grains are growing nicely at the present time but are backward. Crested wheatgrass is making good progress, but bromegrass is dead in a good many places. Native vegetation is making a start but is very slow.

Maximum temperature, 65°; minimum, 33°; precipitation, 0.91 inch; Total precipitation to May 11, 1.90 inches.

Arboriculture - The transplanting of conifer seedlings has continued during the week. The soil is in excellent condition for the work. Green ash and Russian olive seed planted the spring of 1934 are now emerging. Chokecherry seed planted this spring has also emerged.

Horticulture - Nearly all of the second planting of vegetables was completed during the week. Wet weather had prevented using implements such as planters for corn and beans. The early planted vegetables are germinating with a high percentage of stands varying from 95 to 100 per cent. Rhubarb is ready for cutting, but asparagus is rather backward this spring, due perhaps to the effects of last season's drought.

The recent moisture has greatly benefited hedges and shrubs in the trial tests. These showed marked effects of last seasons drought, such as shriveled stems and buds. In some cases the drought injury has been too severe, and cutting back to the ground of various hedges will be necessary. Blue-grass lawns are in better condition with intensely green and thick turf this spring than has been the case in other years. 2,800 tulips planted last fall are up with a very good stand.

The rains have delayed spraying operations. Planting of fruit trees in the orchards and breeding blocks has been completed, more planting being necessary to replace trees killed by last season's drought. Pruning has been completed and the brush hauled from the fields. The first cultivation of the season is in progress. Potatoes have been dipped and cut but not yet planted. Fruit trees have been potted in tubs, and tubbed trees bearing no fruit have been removed from the greenhouse. But little top-working was done last year, due to the scarcity of cions from last season's growth. It is too early to estimate crop prospects for fruit trees, but it is thought that this may be a year of recovery from the effects of the drought rather than a year of heavy yields.

Visitors - Prof. E. J. Thompson, Animal Husbandry Division, N. Dak. Agricultural College, S. C. Salmon, Cereal Crops and Diseases, Robert L. Shotwell, Bureau of Entomology and Plant Quarantine, Dr. H. C. Hanson and Dr. A. D. Stoesz, Prof. in Botany, N. Dak. Agricultural College, with a class of 13 students, studying the pasture management work at the station, Prof. J. A. Munro, State Entomologist, and C. M. Painter, Vocational Training instructor, with a class of high school students from Kenmare, N. Dak.

ARCHER:

During the past week the weather was cool and threatening, but it did not interfere with field work. The soil is in excellent condition, and tillage operations have progressed. Seeding is in progress. The wheat, oats, and barley have been seeded in the rotation plots, and

preparations are underway for the seeding of corn. Owing to cool weather plant growth has been slow. Feed is very scarce, and livestock generally are in poor condition. It is hoped that the growth of grass will soon be sufficient to answer immediate needs.

W. C. Bond, Trustee of the University of Wyoming, and Director W. L. Quayle were station visitors May 7.

Maximum temperature, 69°; minimum, 28°; precipitation, 0.10 inch.

AKRON:

The sky has been overcast with rain clouds practically all week, with two very small measurable quantities of rain. This condition was very favorable to the recently reseeded winter wheat plots. However the mean temperature remained too low for good vegetative growth. Sod lands are very slowly greening up, but it does not now appear possible that they can furnish much pasture this year. Emerged spring seeded small grains are making slow, steady progress, keeping nicely in advance of the thistle, which does not do so well under cool moist conditions.

Field work has been trimming plot lines, working roadways, and trimming alley lines in the nursery. Eight hundred ponderosa and 200 limber pines were set in the open spaces of Forestry Experiment No. 1 the past week. Shrubs and trees are only now breaking into leaf. Orchard is also coming into bloom.

D. W. Robertson of the State Agricultural College visited Friday.

Maximum temperature, 80°; minimum, 30°; precipitation, 0.05 inch.

NORTH PLATTE:

Weather for the week has been about normal. There were several days of strong wind. The worst of these was the 10th, which would have been considered a severe dust storm except for the much worse ones that have been experienced during the spring. Corn planting is well under way in this locality and in the State generally from this point east. Very little has been planted west of here.

On a trip through the winter wheat section of the Nebraska panhandle during the week, only an occasional field of live wheat was observed. Soil blowing has been severe in many localities. Indications are that the winter wheat harvested west of the 101 meridian in Nebraska this year will not be sufficient to seed the normal acreage of that region. Moisture conditions in that section are now favorable, and spring grains are still being seeded. Low yields are inevitable from these late seedings, unless abnormally low temperatures continue through the early summer.

Maximum temperature, 71°; minimum, 32°; precipitation, 0.37 inch.

HAYS:

The first rain of consequence since in September occurred Thursday night when 0.43 inch was recorded on the project. The Weather Bureau measured 0.47 inch. Rains have been reported in various localities but all have been small and very local. The rain reported for Hays covered only a small area.

During the week there was much less wind, and the rain, though of little permanent value, freshened all living plants and cheered up the human population, which is worth a good deal. It is hoped this

shower may have broken the long drought. The rain came too late to make a crop of the small percentage of the surviving wheat, but it will produce a little more pasture for livestock which is very much needed because native pastures have remained dormant. Of the wheat that survives, the best of it is about 8 inches high with heads forming. The acreage that will be worth harvesting will be extremely small. Barley, oats, and spring wheat seeded some weeks ago remain unsprouted. It is believed, however, the shower of Thursday night will cause germination.

The work during the week included soil sampling of a number of plots continuously cropped to wheat and in rotations.

Maximum temperature, 89°; minimum, 36°; precipitation, 0.45 inch.

COLBY:

The weather was unusually pleasant this week, except on Friday, when the wind blew hard from the south. The sun was obscured nearly all day by the dust, and soil blowing was very serious. Rain was recorded on three days, but the total was only a trace. The wheat fields in this section of the State which survived the winter are gradually drying up. Pastures show green only in spots. On some fields where stubble or thistles caught the snow earlier in the season, the thistles are coming up and furnishing some pasture for stock.

Maximum temperature, 77°; minimum, 26°; precipitation, trace.

GARDEN CITY:

Four days of the week were spent on a trip with A. L. Hallsted over that portion of the Southern Plains that has suffered most from drought and wind erosion. A few conclusions resulting from observations made on the trip follow:

1. Clay loam, silt loam, or so called "hardland" soils, have suffered little permanent damage due to wind erosion.
2. "Semi-hard" lands, or sandy loams and loamy sands, are badly damaged if resting on clay layers or bed rock at shallow depths. Many scattered areas are probably permanently injured but not ruined. Others will necessitate considerable expenditure for leveling the wind-whipped surface.
3. Sandy soils are piled in small dune-like knobs wherever thistles or other irregular vegetation allowed the sand to collect.
4. Soil moisture is present to a depth ranging from 3 to 20 inches or more throughout areas visited in the Oklahoma and Texas panhandle and northeastern New Mexico. No soil moisture is present in most of Baca County, Colo., and moisture is present only in local areas in southwestern Kansas.
5. Soil blowing can be controlled under conditions conducive to easy and rapid wind erosion, as is shown on the Dalhart and Tucumcari stations and a few farms in that region.

No work has been done on the plots this week. They are in condition to hold against blowing and are dry throughout.

Maximum temperature, 84°; minimum, 37°; precipitation, 0.03 inch.

TUCUMCARI:

Wet snow which began falling the morning of May 3 continued without cessation until the night of the 4th, with total precipitation of 1.21 inches. This was the greatest amount of precipitation received at one time since August, 1933, and the fourth of over one-half inch total since that date. Total for 1935 to date is now 2.13 inches and

for the past 17 months, 8.26 inches.

Field work has progressed throughout the week. Spring plowing, harrowing, listing, and field cultivating of plots and increase land comprised the major portion of the work, with cultivation and hoeing of tree rows also completed. No planting has been done, but cotton, corn, and peanuts will doubtless be planted next week. All land early listed with tractor will be "pulled in" as the first stage in killing weeds before planting either cooperative plots or increase land.

Farmers are listing as rapidly as possible. Many of them are planting, although the soil is cold. Indications are that fields so planted will be unusually weedy, but since land to be listed under the Soil Erosion Project must be listed soon, farmers in most instances feel they may as well gamble by planting at this time. Considerable scarce, high priced seed will no doubt be lost. Seeding of sorghums could well be postponed 10 to 30 days.

Grass is growing, although the weak, green sprigs appear very scattering, with great spots of bare soil between. Station grapes bid fair to produce a good crop. Blooming dates will soon arrive. Very few station trees well established have died, but in many cases at least the top half of the trees are dead. Very severe dehorning will be done on many elms five to eight years old.

A. L. Hallsted and L. A. Brown visited the station.

Maximum temperature, 84°; minimum, 31°, without any injury by frost; precipitation, none; wind velocity, 6.2 m. p. h., the lowest average in three months.

DALHART:

With no moisture being received after that of the last week end, conditions remain unchanged. There was insufficient moisture received to warrant any cultivation. A few plots were disked and one plot was plowed the first of this week. The soil was not in proper condition for tillage. There have been no crops planted on the station this spring and there will be none until moisture is received. Seed-bed preparation will be necessary of course before seeding.

Trees are sufficiently leafed now so that pruning out of dead branches can soon be started. The vineyard is feebly putting forth leaves. The drying winds continue, but the sand movement has reached the intermittent rather than continuous stage now.

Maximum temperature, 81°; minimum, 31°; precipitation, 0.22 inch.

BIG SPRING:

Weather conditions during the past week have been very favorable for field work. Temperatures have been warm enough so that recently planted seed has a chance for normal germination. Heretofore the soil has been so cold that seed was very slow in germinating, and a considerable part of that planted molded and did not sprout.

The wheat plots in the rotations do not look very promising at this time; the present conditions indicate that they will not get tall enough to harvest with a binder.

Cotton, cowpeas and Sudan grass in the rotations and the cotton spacing and variety plots were planted during the week. Fairly good soil moisture conditions prevailed, and good stands should be obtained.

The cattle feeding tests for this year were completed on May 7, and a Feeders' Day Meeting was held on the 10th, with the local Chamber of Commerce serving lunch at noon. About 300 people, which included a large number of county agents, and vocational agricultural teachers attended the meeting. The meeting was considered very successful, both from the point of attendance and the amount of interest manifested in the results of the experiments. Members of the Animal Husbandry Division of the Texas A. & M. College and the Texas Technological College assisted with the program.

Among the visitors who attended the meeting were W. L. Stangel, Head of the Animal Husbandry Department of the Texas Technological College; D. L. Jones, Superintendent of the Lubbock Station; and J. M. Jones, John H. Jones, and G. W. Barnes of the Animal Husbandry Division of the A. & M. College of Texas.

Maximum temperature, 95°; minimum, 42°; precipitation, 0.03 inch.

LAWTON:

Field work that was resumed after the 2.14 inches of rain received May 3 and 4 was discontinued by a rain of 0.98 inch on the 9th. The latter rain produced some run-off that added a small supply of stock water to the farm ponds. Some very heavy rains have recently been received within localized areas in the southwestern part of the State. The rainfall received May 3 and 4, accompanied by a hard north wind and low temperatures, was very injurious to cotton that had emerged from early plantings.

Wheat, oats, and spring barley are making a good response to the improved moisture conditions and the prevailing moderate temperatures since May 1. Sorghums and cowpeas that were planted about May 1 are emerging slowly and unevenly, but present indications favor fairly good stands in most instances. Sweet clover and alfalfa planted on the rotation plots May 23 failed to emerge, but 4.5 acres of sweet clover planted May 29 shows a stand that is almost perfect.

The cool, damp weather that now prevails is a decided and pleasant contrast to the dust laden skies and windy days that were so common in March and April. Vegetation of all kinds is responding rapidly and farmers are assuming a more cheerful aspect toward crop conditions.

E. F. Chilcott was a station visitor May 12.

WOODWARD:

There is little to report this week except the continuation of the drought. Temperatures have been low and the sky cloudy most of the time, which have prevented the burning of wheat to a crisp, but it has little chance of making a paying crop even in most favored spots. It is remarkable, however, how it hangs on and that it will in some instances make 3 to 4 bushels per acre.

Trees have finally struggled into full leaf, but there are some evidences of borer attacks, and as the flow of sap becomes less the entrance of borers will become more pronounced until a number of species may snuff out over night. The 200 varieties of iris on the station are making a wonderful rainbow display. Station work for the week consisted of cultivating plots, fields, vineyards and orchard, pruning trees, etc.

Maximum temperature, 91°; minimum, 39°; precipitation, 0.09 inch.

BELLE FOURCHE:

Cool, cloudy, threatening weather prevailed most of the week, but only two light showers were received. Heavy rains occurred in surrounding sections, but the northern Black Hills region and Belle Fourche valley again remained a "dry spot". Only 0.40 inch precipitation, distributed in five light showers, has been recorded at the station since April 9, and the surface soil has become too dry for the satisfactory germination of corn and other late crops. There is a very serious shortage of water for irrigation on the Belle Fourche project, less water being stored in Orman Lake that at the beginning of any other season in the history of the project.

Wheat, oats, and barley are emerging on the various rotation plots, but satisfactory stands will not be obtained in a number of instances until after a good rain is received. Winter wheat has made exceptionally good recovery from the effects of soil blowing, and only a small amount of reseeding will be necessary on the dry land rotation field. Winter rye has grown rapidly but is beginning to suffer from lack of moisture on the stubbled-in plots.

Maximum temperature, 80°; minimum, 28°; precipitation, 0.27 inch.

PENDLETON:

Field work on this station is practically at a standstill as all spring sown crops are in the ground and the spring plowing has been completed. A very small acreage remains to be plowed for fallow in the foothill areas. The corn on the rotation plots is emerging with good stands. Crested wheatgrass and Tall oatgrass are beginning to head. Beans were sown on the rotation plots on the 6th. The planting of garden peas continued during the week on the higher elevations, some of the early sown peas are beginning to bloom. The sheepmen are moving their bands of sheep to the summer ranges in the mountains.

Maximum temperature, 70°; minimum, 33°; precipitation for May, none.

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BUREAU
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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

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REPORT FOR THE WEEK ENDING MAY 18, 1935.

HAVRE:

Conditions were cool and moist during the week, and vegetation made a start for rapid growth. Minimum temperatures were below 40° on four nights, and the maximum was above 70° on only two days. With these conditions, grasses and small grains that are up have made very good growth. Domestic grasses are growing rapidly, and native grasses are now large enough for fair grazing. If conditions continue cool and showery for another week or so, native grasses will be very good. Stands of spring grains are almost perfect. Winter rye is beginning to shoot. Winter wheat has made rapid growth and will be shooting soon. Flax was seeded during the week. There is some complaint from farmers who seeded without previous cultivation that the grain is weedy. This has been an excellent spring to eradicate weeds, but as usual the delay of a few days is necessary before seeding.

Ralph Bodler, State leader of county agents, was a visitor the 16th.

Maximum temperature, 75°; minimum, 33°; precipitation, 0.84 inch.

JUDITH BASIN:

The weather continued cool with light showers of rain, which have interrupted all field work. Some miscellaneous seeding was accomplished during the week. Grain seeded three weeks ago has emerged with good stands on all methods. Winter wheat continues to grow slowly, and the complaints of weed infestation are becoming more numerous. Some farmers are cultivating their fields rather vigorously in an attempt to destroy some of the weeds. Spring tooth harrows, double disks, and spike tooth harrows are the implements used. Weeds are not so numerous on the station as they are on adjoining farms.

Maximum temperature, 71°; minimum, 29°; precipitation, 0.42 inch.

HUNTLEY:

Precipitation received during the week raised the amount for May to date to 2.07 inches, which is 0.08 inch above the 25-year average for this station. One rain of 0.87 inch fell gently throughout a 24-hour period and was all absorbed by the soil. Other showers were more rapid and puddled the soil to the extent that a heavy crust formed during the first drying day and imprisoned the seedling plants that were about ready to break through the surface. Flax, alfalfa, grasses, and some plots of late-sown grain were checked in that manner. To-day is showery, and it is hoped enough moisture will fall to soak up the crust and let the plants through.

Growing temperatures were more favorable for crop development during the week, and all annual and perennial plants that had emerged previous to the rains made a good growth. Alfalfa and grasses made marked advancement, and winter wheat on plots having good stands also showed considerable improvement. Where the stands of wheat were thin and the crop stunted, the weeds are out-growing the sown crop. Ranges and native pastures are greener this spring than for the last three years. Inspection has shown that on the heavily grazed areas much of the green growth is weeds rather than grass.

The only field work done during the week was the preparation and repairing of equipment for the dry-land pastures.

Maximum temperature, 79°; minimum, 31°; precipitation, 1.15 inch.

SHERIDAN:

The weather from the 12th to the 15th was cloudy and very cold for this late in the season, but with no freezing temperatures. Light rain, amounting to 0.21 inch, fell over the three days, just enough to dampen the ground and prevent field work at times, but not enough to add anything to the moisture content of the soil. The last three days were fairly mild, with a maximum temperature above 70° on one day. Growth of all vegetation except weeds continued to be very slow. More grain and some grass and alfalfa in new seedings emerged.

Corn in the rotations and the corresponding date of planting was planted on the forenoon of the 17th. Shortly after noon about the heaviest hail storm yet noted on the station occurred, bringing a total of 0.7 inch precipitation in about 30 minutes. The hail was small and did little damage except to beat spring grain and garden crops pretty well to the ground. Growth of these crops was so short, however, that complete recovery should be quick. Alfalfa that had made any growth was damaged some. Some washing resulted on roadways, rotation alleys, on some of the steeper slopes not in grass, and in the ravines running through the station. Apparently some of the grain was washed out along the sides of some of the check plots of the rotation field. Another heavy dash of rain occurred in the evening but did not last long enough to cause any more washing. A gentle rain has been falling the most of this morning (18th).

Maximum temperature, 77°; minimum, 35°; precipitation, 1.21 inches.

MANDAN:

Agronomy - The past week has been cloudy and cool with three light rains.

Plowing for corn in the rotations and other preparations were completed, and corn is being planted to-day. The average date of planting is the 19th. Small grain is coming on nicely, and the indications are that it will get ahead of the thistles. Potatoes were planted in the rotations early in the week. Seeding of the increase grass nursery was completed for the Soil Conservation Service. Crested wheatgrass is making a good growth at present. The old planting made in 1915 is in good condition and is making good growth. Alfalfa in the forage crop tests is all dead. Some younger and thinner plantings are making a fair start.

Native vegetation is very slow in getting started. This has been caused by the cool spring and the adverse growing conditions in 1933 and 1934. Crested wheatgrass at the pasture which was planted in 1932 is making a good growth. The bromegrass pasture which was planted in 1921 is dead. This was brought about by heavy grazing for several seasons under adverse conditions. It was put in on breaking, and a good deal of native vegetation had come back into it.

Russian thistles are making a lot of extra work at the pasture this year. They have blown into the fences and piled up badly in many places. In several places the fences were torn down. The corrals were filled with thistles. They are also drifted into the dams, which are nearly filled with water. This is the first time in 20 years that

thistles caused so much trouble at the pasture.

Maximum temperature, 65°; minimum, 34°; precipitation, 0.12 inch.

Horticulture - Potatoes were planted on May 14 and 15. Warba was added to the varieties under test. The first seasonal spraying has been completed, and also the first seasonal cultivation of orchards. Budded stock was cut back in the nursery. Old apple trees in the Hibernal block have been worked on, dead bark being removed and wounds covered with grafting wax. The cool weather has delayed bloom this year. Blossoming dates for fruit trees will probably be two or three weeks later than usual.

Arboriculture - The lining out of conifer seedlings has been continued during the week and is being completed to-day (Saturday). Buffalo sod has been planted along the bank of a terrace in the main windbreak to prevent wind and water erosion. Cultivation of nursery fields has been started, and a certain amount of tractor cultivation has been done around hedges, roads, and blocks of trees.

Emerged seedlings have made practically no growth, due to the cool weather. Most of the seed planted this spring has germinated and will break through when warmer weather appears. Gophers, rabbits, and blackbirds are eating off the tops of red cedar (J. virginiana) as fast as the seedlings show through the ground. No damage is being done to J. scopulorum seedlings emerging alongside.

Trees are slow in starting growth, very few leaves having appeared to date. American elm has set a fair crop of seed. Chinese elm seed is very light, the seed which has set being out on the ends of slender branches where it will be difficult to collect.

Visitors - M. M. Hoover, Erosion Control Grass Nurseries, and O. E. Reed, Chief, Bureau of Dairy Industry.

BELLE FOURCHE:

The spring drought was definitely terminated on May 12, 13, and 14 by a slow, drizzling rain, totaling 0.91 inch. This was of great benefit to all vegetation, and it supplied adequate moisture for the germination of seed, some of which had been lying in dry soil for nearly a month. Crop prospects were further improved by the commencement of another steady rain at the close of the week. Plant growth was backward, owing to cool, cloudy weather which prevailed, but small grain has emerged with 75 to 90 per cent stands on most of the corn stubble and fallow plots and on all of the fall listed and fall plowed plots. Only a small proportion of the grain on spring plowed land has come up, but satisfactory stands should eventually be obtained. Fall grains and pasture grasses have made great improvement since the rain. Corn and flax plots were prepared for planting, and the seeding of flax was completed, but rain the latter part of the week necessitated postponing the planting of corn.

Maximum temperature, 74°; minimum, 33°; precipitation, 1.01 inches.

ARCHER:

During the past week the weather was wet, cool, and cloudy with a total precipitation of 1.51 inches. There were but two short periods of sunshine. Precipitation has been recorded every day since May 7, and it is still raining. Since May 12 field work on plowed land has been at a standstill. A 20-acre field of alfalfa, in which the stand was very thin, was disked and seeded to crested wheatgrass.

Dr. G. H. Starr visited the station May 14 and 16 and planted his wheat and potato disease plots.

Maximum temperature, 64°; minimum, 31°; precipitation, 1.51 inches.

AKRON:

Cloudy, cool weather throughout, continued from last week, with a showing of precipitation every day. The heaviest during any one 24-hour period was 0.91 inch last night. This shower is continuing this, Saturday, morning, and there is now some run-off to the lower depressions from a saturated surface soil. Wind has gently drifted in from the east during the whole of this two-week period. Field work has been at an absolute standstill throughout the countryside. There is now some question of getting corn seeded in good season. A respite would be in order, greatly welcomed by everyone, so that current field work could be attended to.

The winter wheat plots recently reseeded to spring grain have emerged. Spring seeded small grains are livid green over the plots. Winter wheat that survived is stooling and covering the ground nicely. This cool, damp weather is very unfavorable for the thistle and conversely favorable for the spring seeded grains, so that this station should have some weed-free spring grain plots this year.

Vegetation is slow about showing active growth, waiting, perhaps, for warmer weather. The orchard has been fitfully blooming during the week.

Maximum temperature, 73°; minimum, 34°; precipitation, 2.24 inches.

NORTH PLATTE:

The entire week has been cloudy and cool. Showers have been frequent. While rain has been recorded for six consecutive days, the greatest amount for any 24 hours was 0.56 inch. The total precipitation for the month to date is 1.56 inches, which is slightly below the normal for the period.

Field work has been possible on only one day, and no corn has been planted. Low temperatures have retarded vegetation generally; but wild grasses are making a good showing, and pastures are greener than for several years.

Maximum temperature, 75°; minimum, 38°; precipitation, 1.30 inches.

COLBY:

The long drought was ended this week by six days of cloudy and rainy weather, which has thoroughly wet the surface soil to a depth of more than 6 inches. The precipitation has all come slowly in light showers and mists with almost no wind and almost continuous cloudiness between showers. The dust seems to be absorbing these light showers nicely, although not so readily as the ordinary soil in a good state of tilth. The dust piles appear to be absorbing the moisture more readily, however, than the hard soil where the loose surface has been blown away. The temperatures have been low for this season of the year.

Manure was applied to plots 156D and 557C - 560C on Monday. All the fallow plots which are to be plowed the middle of May were plowed Thursday, except 551B - 560B. Plots MF 4C and 5C were listed at the time the others were plowed. Plots 551B - 560B will be plowed as soon as possible after the rain.

Maximum temperature, 78°; minimum, 38°; precipitation, 1.27 inches.

HAYS:

It has been a quiet, cloudy, and rainy week of which only one day failed to make a contribution to the total of 3.80 inches of rain for the week. During the same period the Weather Bureau gauge, three-fourths mile away, recorded 4.19 inches. Rain gauges operated by the soil erosion men indicated even larger differences in the amounts of precipitation at different points over the 3,500 acres belonging to the experiment station. Practically all the rain fell slowly and in light showers so that most of it entered the ground. There was practically no loss by run-off. Investigations indicate the moisture has penetrated the soil to a depth of at least 2 feet. To a depth of 14 inches it is wet enough to make mud balls. It has been too wet all week for any field work, and at present it looks like it may be nearly another week before the top soil will be dry enough for tillage.

The rains came too late for the winter wheat except on 3-year fallow. On the latter the growth now averages 18 inches, and although no heads have emerged they are well formed in the boot. The best of the wheat on other preparations is extremely spotted. It seems possible that some of it may produce grain, but the yield will be so small it hardly seems worth leaving. Oats, barley, and spring wheat seeded some weeks ago are now emerging. Since the rains have commenced, pastures are greening up rapidly. Much of the green that appears in the pasture, however, is not buffalo grass, but on the other hand there is not as much of the buffalo grass dead as was believed. However, there is no doubt that considerable of it is dead.

Maximum temperature, 89°; minimum, 40°; precipitation, 3.80 inches.

GARDEN CITY:

Rain may rightfully headline the weeks news in this part of Kansas, 1 inch falling on Monday and 1.35 inches on Friday and Saturday. All of it came as a slow, gently falling series of showers and a slow drizzle between showers. There was practically no run-off, and the formerly powder-dry soil is now wet to a depth of 12 to 16 inches in cultivated fields. This is the heaviest rainfall in one week since September, 1933.

Twenty-eight plots were plowed between rains this week. This is late for the operation, but the hard, dry soil was not disturbed earlier due to danger of facilitating wind erosion. Sorghums and corn will be planted as soon as the ground can be prepared.

Maximum temperature, 92°; minimum, 41°; precipitation, 2.36 inches, to 8 a.m. May 19.

TUCUMCARI:

Field work has been impossible much of the week, due to wet ground. Precipitation of 1.21 inches this week, following 1.21 inches previously received this month, came in such manner that surface soil was sticky several days. No run-off has occurred, and moisture is the most satisfactory in three years.

Between showers it was possible to plant peanuts, cotton, and corn, with a rowed and a drilled test with grasses also planted. No other station crops have been planted, although farmers have been busy putting sorghum seed into soil too cold for best results. As soon as fields dry sufficiently tractor cultivator will continue "pulling in" lister ridges on north field rotation plots, cooperative plot land, and

increase land. Such treatment, followed by spring tooth harrow or field cultivator run diagonal with the rows, puts land in ideal condition for planting with furrow openers on surface planter, planting in original lister furrows.

Little fruit will be produced, for many trees were killed by drought, many injured severely, and some which bloomed profusely now show but an occasional fruit. Grapes, to the contrary, promise a very good yield.

The week was comparatively cool and cloudy.

Maximum temperature, 80°; minimum, 43°; wind velocity, 7.0 m. p. h.

DALHART:

Gentle showers falling during the past four days have furnished a total of 1.61 inches to noon to-day. This will furnish sufficient moisture for seed-bed preparation. Approximately one day's tillage work has been accomplished between showers. This is all of the field work accomplished during the week. The penetration of moisture has been good, and none has been lost by run-off.

The rain will probably cause the grapes to continue to leaf out. The vines have been trying to leaf out for the past four weeks and are only now at the stage frequently reached after one week's growth. Rye seeded for a cover crop in the vineyard was completely dead (except for an occasional plant), and there remained no available moisture for the grapes except in the grape row. Apparently the Concord grape is going to show the least recovery from drought. Of the 10 Concord vines in the vineyard none are showing any life at this time. A few vines appear dead in some of the other varieties, although most all vines show ability to recover.

Maximum temperature, 89°; minimum, 41°; precipitation, 1.53 inches (with 0.08 inch since 8 o'clock).

BIG SPRING:

Little or no field work has been accomplished since Tuesday of this week. A torrential rain of 2.25 inches was received that night, and two rains since have brought the total for the week up to 2.84 inches. This heavy rain was of untold benefit to the ranches; it will not only start the grass, which is late this spring, but it has filled all the stock tanks, which have been dry for a long time.

The farmers are not in such a cheerful mood, for a large percentage of them had their crops all planted and part of them up to good stands. The heavy rains washed in the loose soil to such an extent that practically everything will have to be replanted. This is not very encouraging when there is an acute shortage of seed stocks and feed for work stock.

The station cotton was just starting to emerge, and it is now covered 2 to 3 inches deep. This, together with other crops that had been planted, will all have to be replanted as soon as the fields are dry enough.

Some of the wheat plots may now stretch up enough to be harvested with the binder, but most of them are heading so short that they will have to be mowed.

During the first two days of this week station work consisted of planting increase milo, knifing beds, and cultivating the evergreen planting. Since the rain time has been devoted to repairing machinery and treating seed with copper carbonate.

Maximum temperature, 95°; minimum, 48°; precipitation, 2.84 inches.

LAWTON:

Cool, cloudy weather and abundant rainfall throughout the past week provided a sharp contrast to any period of similar length for many months. The 3.74 inches of precipitation recorded May 13 to 18 brought the total amount received since May 1 up to 6.95 inches. The station soils are well filled with moisture, and farm ponds are overflowing. High water along the Red River has been responsible for considerable property loss and several deaths. A brisk, threatening fall of hail was recorded twice during the week. Damage was only temporary and was confined principally to corn and early planted cotton. The cool temperatures and drenching rains that have prevailed since the first of the month provided optimum growing conditions for wheat, oats, and spring barley. Wheat has made an almost unbelievable recovery from the early spring drought injury, but the yields will be spotted and generally light, except in the northern part of the county. Oats have made an excellent growth, and prospects for very good yields on station seedings are very favorable. Farm complaint about a heavy loss from smut is very prevalent. Station oats was treated with formaldehyde previous to seeding, and only a trace of smut can be found. Leaf rust is very prevalent on wheat except on a few resistant varieties.

Early plantings of cotton present a sickly appearance, and stands have been reduced by cold, wet weather. Planting has not been extensive in this part of the State as yet, but replanting will be necessary on most plantings that have been done. Station plantings, to date, consist only of the first two dates, April 15 and May 1.

Kafir on the listed plots and on a few surface planted plots will have to be replanted, due to poor emergence and to some soil erosion. Two-year old sweet clover is blooming heavily and should produce a good seed crop. The second growth of alfalfa is also growing rapidly. With the exception of a few short intervals, but very little field work has been possible since May 1.

WOODWARD:

This has been a week of practically continuous rainfall. Precipitation recorded is as follows:

May 12	.40
13	1.48
14	.04
15	.04
16	.25
17	3.98
Total...	6.19

Although the rivers are bank full, there has been surprisingly little run-off or washing. Most soil was very dry and much of it was rough and loose, forming a good absorptive surface. No doubt trees and other deep rooted plants on sandy soil will take a new lease of life. There will be a few plots of wheat on sandy soil on the station that may yield 10 bushels or more per acre. Most wheat over the country will yield practically nothing. Farmers have been using one fanning mill

practically continuously all spring in cleaning their seed. From now on we will likely need to turn over both mills to them.

"The first landscape school" in Oklahoma was held in the rain at this station May 13 and 14. Eight county demonstrators attended it, as well as several of the Extension force from Stillwater. Everyone seemed to feel that a great deal of information had been secured despite the handicap of wet weather.

Dr. Hartley and Mr. Wright both of Forest Pathology spent most of the week at Woodward.

Work of the week consisted of general repairing of machinery, working roads, planting grass, mulching trees and sprouting grapes.

Maximum temperature, 94°; minimum, 43°; precipitation, 6.19 inches.

PENDLETON:

Warm days and cool nights prevailed all week, with frosts on three nights. Winter barley and early sown Federation wheat are heading. Early sown Alaska garden peas for the canneries are in bloom. The crop prospects in this section are very good, but in the four counties to the west crop conditions are very poor. If good rains are not received within the next ten days these counties will have the poorest crop in years. On the station grounds the hybrid lilacs, Van houtei spireas, Bachtel flowering crab and Hugonis roses are masses of bloom.

Visitors - Fifteen county agents and extension service men in Eastern Oregon counties, on May 14.

Maximum temperature, 70°; minimum, 28°; precipitation for May, 0.16 inch.

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JUL 9 - 1935
BUREAU OF PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

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REPORT FOR THE WEEK ENDING MAY 25, 1935.

HAVRE:

Although there was only 0.02 inch precipitation at the station during the past week, weather conditions have been somewhat showery, but these showers have been rather local in character. Temperatures were low for this season, and growing conditions have been very good. Grasses and winter grains have progressed rapidly. The so called June grass has headed at a height of from 6 to 8 inches. The early range conditions on the prairie are better than they have been for several years.

Later seedings have germinated quite rapidly. Flax is up and corn is germinating nicely. Rye has grown rapidly, and in some cases is 15 inches or more in height. Alfalfa is growing very well, and is about as far along as it usually is at this time. Summer fallowing is progressing well on the station. A commercial field of crested wheatgrass was seeded during the week. A field of oats is being seeded. This field will be seeded to crested wheatgrass this fall and an effort is being made to clean the seed bed in good shape before seeding. The leaves on trees are making very slow growth. None of the deciduous trees are completely leaved yet. Tulips are starting to bloom and lilacs are barely started.

Visitors included Sam Sloan, Extension Agronomist, and I. M. C. Anderson, Livestock Specialist, of the Montana Extension Service.

Maximum temperature, 73°; minimum, 35°; precipitation, 0.02 inch.

JUDITH BASIN:

The weather during the past week has been favorable for plant growth and most crops made good progress. All small grains on the station have emerged with excellent stands and are reasonably free from weeds. Grasses, alfalfa, and sweetclover have also germinated well and with any thing like normal growing conditions the next two months should result in good stands. Last year's spring seedings of such crops approached failure in most instances. Late fall seedings of crested wheatgrass made on fields having a light cover of Russian thistles for winter protection have given the best stands during the past three seasons. During these years a total of 60 acres of such land has been seeded on the station with fair to good stands. An equal acreage seeded on fallow in the spring during 1933 and 1934 has for the most part resulted in total failure.

The steers were turned on the native grass pasture May 23, just four weeks later than those on the bromegrass and crested wheatgrass pastures. Average gains per steer for the brome pasture were 61.7 pounds and on the crested wheat 87.9 pounds for the four week period.

Maximum temperature, 71°; minimum, 34°; precipitation, 0.29 inch.

HUNTLEY:

Higher temperatures during the week have been reflected in marked growth of all crops. Winter wheat, grasses, and alfalfa have shown the greatest response to the more favorable growing conditions, but spring-sown crops have also shown improvement in stands as well as height. Weeds are making a rank growth in uncultivated areas. Field work was possible during the first half of the week but was halted on account of rains during the last half. Hogs were weighed and placed on alfalfa

pastures. Annual crop pastures are making satisfactory growth but are yet too immature for grazing. Soil samples taken during the week show moisture penetration to have reached a depth of 22 inches on most plots. Little difference in depth of penetration is apparent between plots that were fallowed last year and those that were cropped.

Maximum temperature, 78°; minimum, 37°; precipitation, 0.78 inch.

SHERIDAN:

The light rain falling on the 18th continued quite steadily until the morning of the 20th, making a total of 2.69 inches of precipitation from noon on the 17th to the 20th, slightly more than the station average for the month. No field work was possible until the 23rd, when seed blocks of corn, the varieties of that crop, and a corresponding date of planting were planted. All corn except a part of that in the pasture blocks has now been planted. Garden plants were received from Cheyenne the 23rd and a part of them have been planted. Late garden crops were planted the 24th and 25th, and potatoes the 25th.

Grass continued to make a good growth since the rain, and other crops have made some noticeable growth in the last day or so. Flax emerged in the varieties with a good stand early in the week, and there now appears to be a fair stand on the most of the rotation plots also. Some of the trees are now beginning to come into leaf.

Washing of the rotation field from the storm of the 17th was worse than was at first thought. Ditches were washed out across several plots which had not before washed to any extent. This was caused by run-off from the roads and alleys, however, rather than by run-off from the plots themselves.

Maximum temperature, 72°; minimum, 36°; precipitation, 1.76 inches.

DICKINSON:

Two days of sunshine during the week with slightly higher temperatures caused rapid growth of grains and grasses. With the exception of cultivated grasses vegetation is not as far advanced as usual on this date. Stands of early seeded grains are now excellent. An increase field of Northwestern Dent corn was planted for silage on May 23. Pasture grass mixtures were seeded. Fruit trees were sprayed early in the week.

A meeting of the Western North Dakota Livestock Growers Association was held in Dickinson, May 20 and 21. The meeting was well attended and there was an active interest in all the programs. More visitors from outside the State attended than during previous meetings. Governor Walter Welford and many ranchers and others in town for the meeting visited the station.

Maximum temperature, 70°; minimum, 33°; precipitation, 0.36 inch.

MANDAN:

Agronomy - The past week has been favorable for field work. The weather remains cool for this time of year. All corn planting was completed during the week. The plantings included variety tests, silage block, seed blocks, and breeding block. Grass seedings were made in the forage crop trials. Part of the grass plots were seeded for the Soil

Conservation Service. Small grains are growing nicely at the present time.

Maximum temperature 74°; minimum 34°; precipitation 0.19 inch.

Cooperative Grazing Experiment - Steers for the grazing experiment were received during the week. They have been branded. Only 50 steers will be used in the trials this year. The 30-acre and the 50-acre pastures will not be grazed this season. Grass is very poor on these pastures, and it seemed desirable to allow them a year of rest. The bromegrass pasture is also dead. It was put in during 1921 and has been heavily grazed under adverse conditions. Grass in all pastures is slow in starting and feed is not abundant as it should be for this time of year. Cattle will not be started on their pastures until June 1. It is a little too early to estimate the damage done to the native grasses under different intensies of grazing by the severe drought of 1933 and 1934.

Horticulture - The last planting in the acre garden was completed May 25. With the exception of setting out tomatoes, eggplant and pepper, all vegetable plantings are now in. Asparagus, rhubarb, and set onions are yielding very well at the present time. Muskmelons, watermelons, and sweetcorn in the breeding projects were planted during the week. About 120 corn selections, 130 muskmelon, and 55 watermelon selections are included. The cool weather prevailing during May has retarded plant growth considerably. Plants in coldframes and outdoor seeded stock are barely moving. Lawns were mowed, groups spaded, and the grounds in general cleaned up during the week. Several hundred seedlings of perennial flowers were set out on the grounds. At the present Ribes aureum, Spirea arguta and Prunus triloba are commencing to bloom.

Crossing of plums in the field has been in progress throughout the week. Most of the Japanese hybrid varieties are showing a light bloom this year, many of the native varieties and selections are showing a heavy bloom. Many trees that bore heavy crops last year show considerable killing back as a result of the drought. There will be a lot of dead wood to remove in the June pruning. Native fruits such as Juneberries, chokecherries, sandcherries, and Golden currants show but little drought injury and are in heavy bloom. Apples and crabs are variable, some varieties showing a heavy bloom, and others little or no bloom. Red currants and gooseberries have suffered considerably from the drought, and generally show a light bloom.

Arboriculture - Thirty-five conifer seedbeds of Black Hills and blue spruce, and Scotch and western yellow pine have been planted during the week. A few beds of several other species have also been planted to grow seedlings for testing purposes. Cultivation of nursery field has continued, and all fields have now been cultivated once. Dead wood and other debris have been raked in the main windbreak and part ofthe testing blocks.

Seedlings have made very little growth during the week. Most of the species are now breaking through the ground and give indication of fair stands. Honey locust seed treated with hot water has not given nearly as good a stand as untreated seed. Some American elm seed planted last June has just emerged. This is rather unusual, as it is generally accepted that American elm seed cannot be carried over a year.

BELLE FOURCHE:

The steady rain which commenced at the close of last week continued for two days, and 1.33 inches precipitation was received during the entire storm. Light showers occurred on May 21 and 22, and a total of 2.41 inches precipitation, mostly in the form of slow steady rains, has been recorded since May 12. Soil samples taken May 23 show that moisture has penetrated to a depth of 16 inches on continuously cropped wheat plots and to a depth of about 30 inches on land fallowed in 1934.

Conditions have been favorable for tillering of small grain, but the almost toto[1] lack of clear, warm weather this spring has retarded plant growth to such an extent that most all crops, trees, and shrubs are about three weeks later than usual. Small grain made a good growth during a couple of moderately warm days late in the week. Spring grain is coming up on spring plowed land, and excellent stands have developed on all other cultural treatments. Alfalfa and sweetclover have emerged with perfect stands on all plots, and bromegrass apparently is coming up equally well. Planting of corn was completed May 23.

Maximum temperature, 72°; minimum, 32°; precipitation, 1.40 inches.

ARCHER:

During the past week the weather was cold and wet. The humidity was high, and the precipitation kept the soil too wet for field work. Precipitation occurred during five days of the week, and all the days were cloudy. Snow fell during May 19 and 20. To-day shows indications of clearing. Plant growth was very slow. Wheat seeded May 9 and 10 is showing first signs of emergence. All winter wheat plots were reseeded to spring wheat. Crested wheatgrass has made considerable growth, but the native grasses are slow. The prairies are showing a tinge of green. Work at the station consisted of fencing, tree planting, and road repair.

Director W. L. Quayle visited the station May 23.

Maximum temperature, 63 minimum, 31 ; precipitation, .37 inch.

AKRON:

The rainfall continued unabated until Tuesday. The rain reported falling Saturday morning continued, to register 1.55 inches, the heaviest 24-hour precipitation for the series. The rate slackened later in the day, and the predicted heavy run off did not materialize, despite the fact that 2.57 inches of rainfall was received this past week.

Field work was started Wednesday. Soil was heavy, but experience has registered no difficulty on account of baking. Corn has been planted on the cereal nursery ground and is being planted on the ground for cereal variety experiments another year. The plowing of the land for the fallow for next year's cereal variety experiments was completed, and that for this year's forage variety experiments was started.

Tree planting was resumed, 225 red cedars, 100 Siberian elms, 200 caragana, and 100 choke cherries were added this week.

Small grains are making very nice progress, though rapid growth has not been possible because of the cool weather. Persian Lilac is very showy on the station by this week end.

Maximum temperature, 63°; minimum 34°; precipitation, 2.57 inch

NORTH PLATTE:

Weather for the week has continued cold and cloudy with rain on the first three days. Light frost with a 34° minimum occurred on the 23rd. Soil dried out enough so that corn planting could be resumed on the 23rd. With temperatures running about 10° below normal and with little sunshine, earlier planted corn has made no progress. It is possible that considerable replanting will be necessary unless warmer weather comes in the very near future. Alfalfa and small grains are yellow green in color indicating the need of sunshine.

Maximum temperature, 63°; minimum, 34°; precipitation 3.17 inches.

COLBY:

After 10 consecutive days of rain no precipitation was recorded on two days, but the weather has remained cool and mostly cloudy. This forenoon it was misting most of the time, and it has been cloudy all day. The total precipitation for the ten days of rain from the 13th to 22nd was 2.31 inches. It all fell in light showers and soaked into the ground without much waste. The moisture penetrated approximately 12 inches on sod and in plowed land on the level. On hard land where the loose surface had blown off and in the dust piles it penetrated to a depth of about 7 inches. There appeared to be no difference in penetration between the hard land and the dust piles.

Pastures have not greened up much where there had been no snow drifts. The spring sown small grains planted toward the end of April are beginning to come through the ground. The plowing of the fallows, which was interrupted by the rains last week, was finished Wednesday. The corn plots were prepared for planting Thursday and were planted yesterday. The ground was a trifle wet for ideal work and the weather and soil were rather cool, but a satisfactory job was done. The beans were also planted. Some preliminary preparation was done on the sorghum plots. In two of the corn plots where the dirt had drifted in piles in the stubble and thistles it was necessary to do some work with a road grader to level off the piles and pull out most of the thistles before the ground could be listed.

Maximum temperature, 63°; minimum, 40°; precipitation, 1.04 inches.

GARDEN CITY:

Spring tillage operations progressed rapidly during the past week throughout this part of Kansas. The last half of the week was dry enough to work in nearly all fields. Dry Land plots were plowed, listed, and given both early and late spring tillage during the past two weeks. There was no moisture or weed growth prior to May 13, and all rain came slow enough to prevent runoff, so early and late tilled plots would be on the same basis regardless of how they were worked this spring. Plots are in good tilth for spring planting. A mild dust storm was experienced in this afternoon, May 25. Temperatures during the week were consistently cooler with less night and day variation than average.

Mr. O. R. Mathews visited the station May 24.

Maximum temperature 68°; minimum, 43°; precipitation, .74 inch.

HAYS:

Rains have been frequent during the week, keeping the ground too wet for field work on the project. It has been impossible to do

tillage work ordinarily done about the middle of May. All remnants of winter wheat are now making some growth, and heads are beginning to emerge. Alfalfa on the Dry Land project is just starting growth. Alfalfa on the bottom land is about 10 inches high. Barley, oats, and spring wheat are all up to a very good stand and looking fine except for lateness.

Maximum temperature, 66°; minimum, 41°; precipitation, 1.33 inches.

TUCUMCARI:

Weather has been so cool and cloudy that fields have dried slowly, and implements were kept out of fields two days, although only 0.60 inch precipitation was received. The total for May to date, 3.02 inch, is by far the greatest in any month for nearly two years, and crop prospects are likewise better than in the same period.

Work included pruning dead wood from station trees, plowing fallow plots, filling furrows on cooperative plot and increase land with lister cultivator, and spring tooth harrowing in preparation for planting. Rowed alfalfa has been cultivated.

Temperatures have remained very low since the rains, with the mean for May to date 8° below normal for May. Corn, cotton, and peanuts planted 8 days ago have sprouted, but have not emerged. Farmers, impatient to work in moist soil, simply cannot refrain from planting sorghums, and a large percentage of the row crop land of this section is planted. Much wheat on the Plains which two weeks ago seemed past saving now promises a fair yield. Ranges have also responded rapidly.

A good portion of dry land and cooperative plots will no doubt be planted next week if temperatures rise. Practically all land should be in readiness for planting by the middle of the week.

Maximum temperature, 77°; minimum, 42°; wind velocity, 6.8 miles.

DALHART:

Weather conditions remained favorable for field work during the week. Field work consisted of preparing seedbeds for row crops and working tree plantings. Most of the tillage work has been completed but no seeding has been done. We expect to start planting this next week, although the planting operation will not be rushed unless additional moisture is received. Plowing and listing has been done with optimum moisture conditions during the week.

Only a few tree replacements were made this spring, but a relatively high survival of those planted is expected. The grape vines are now starting nearly normal growth -- although growth is very much retarded for this time of the year. A few of the ash trees north of the office are starting to leaf out. These are among the trees which did not leaf out in 1933 until September 1.

A few farmers are starting to plant, although with the cold soil (augmented by relatively low minimum temperatures during the past week) most do not plan to start planting until the coming week.

Maximum temperature during the week 74°; minimum, 43°; precipitation 0.14 inch, which brings the May total to 1.92 inches or slightly less than normal for May to this date. This month so far has been characterized by a minimum of days with a southwest wind. During the first 24 days of the month the prevailing direction was in the southwest only 4 days in contrast to a mean of about 1/3 of the time for this season of the year.

BIG SPRING:

This has been a week of replanting for the Station as well as

for practically all the farmers of this section. The torrential rains of last week washed soil in on the freshly planted crops to such an extent that they could not emerge. This rain was followed by a sandstorm on May 18, which covered up or cut off all of the early planted crops that were large enough to survive the rain damage. The rains left the fields packed very smooth, and then the wind started the soil moving before it was dry enough to work. These various weather conditions have caused many farmers to plant over for the third time; as a result the seed problem is becoming rather acute with many of them.

Heavy rains have been reported in many sections of the county this week, but the station only received a light shower.

Planting has occupied the greater part of the time of the station force during the week. Cotton varieties, spacing and rotations were replanted, as were the cowpeas in the rotations. The May 15 date of grain and forage sorghums, cowpea and soy bean, and peanut varieties as was also kafir and broomcorn in the rotations. Other work consisted of cultivating all vacant spots to prevent further soil movement.

Maximum temperature, 85°; minimum 51°; precipitation, .05 inch.

LAWTON:

Five showers that totaled 0.35 inch of precipitation during the past week, a comparatively low average wind velocity, and subnormal temperatures made field work possible only on short intervals on the soils that were already saturated with moisture. The May rainfall now totals 7.24 inches. Temperatures during the week ranged from a minimum of 46° to a maximum of 77°.

Native grasses, alfalfa, sweetclover, wheat, oats, and barley have apparently made full use of growing conditions that have been optimum for such crops this month. Wheat is heavily loaded with leaf rust, and the early maturing varieties are approaching maturity with considerable rapidity. Such wheats as Turkey, Blackhull, and Kanred appear to be quite late for this time of the year, and they will likely make the greatest response to the late moisture improvement. Spring barley also indicates a late maturity for that crop. Early seedings of oats have begun to ripen quite rapidly the past three days. Corn shows a distinct need of warm weather. Sorghums planted about May 1 have made but little growth to date. Planting of the chinch bug sorghum resistance project was finally completed during the week, and most of the ground was worked with a rotary hoe.

The May 15 planting of cotton and all other plantings of cotton that have been delayed so long by cold, wet weather are yet to be made. Considerable replant of sorghums in the rotation plots also remains to be done. Cowpeas have suffered from weather conditions and plant diseases to the extent that replanting may be necessary. In an extensive variety nursery only a few have survived and these plants are in a weak, sickly condition. Soy beans appear to be quite thrifty.

Rains have fallen frequently and copiously throughout the southwestern part of the State. In many places the destruction of property has been very heavy, but this part of the State as a whole, is in a very encouraging condition with respect to farm crops.

WOODWARD:

The past week has been misty and cloudy with a trace of precipitation every day with the total forthe week .07. The soil was saturated by last weeks heavy rainfall and has dried very little. Some plowing has been done but otherwise practically no field work.

The recovery of the wheat is remarkable and probably almost unprecedented. Fields that were burnt brown are now a vivid green with short heads forming thickly on every plant. The plants that were headed or ready to head at the time of the rain are now putting out many new heads on shorter stems. Should wheat continue to develop there would be two distinct dates of ripening for the same plants, but it is likely hot weather will shrivel the later developments. At best plots will be ragged and unsatisfactory to harvest.

The whole country wears a green fresh, cleanly washed aspect that is very welcome after the smother of dust that prevailed for months. The most interesting feature of the landscape planting at present are the several species of penstemons, with colors in many shades of pink blue and purple. The virginal mock orange is one mass of large white blossoms.

Work of week has consisted largely of grading and rebuilding roads and regrassing ditches.

PENDLETON:

Eastern Oregon and Washington are in need of rain. The winter wheat in some of the drier areas of the Columbia Basin is beginning to "burn", with some fields reported to be too far gone to be saved by rains. All crops on thebetter lands in this county are still in excellent condition, fair crops on these lands would be obtained without further rains. The winter wheat is heading, spring cereals are making a nice growth, early sown garden peas are in bloom, and late sown peas are just emerging. On the station the old stands of alfalfa are showing the lack of rain, the subsoil moisture being exhausted to a depth of 10 feet. New seedings of alfalfa were cultivated this week

The Western Section of the American Society of Agronomy will meet in Pendleton on June 18 to 21, inclusive.

P. C. McGrew, Agricultural Engineer, Soil Erosion Experiment Station, Pullman, Wash., was a station visitor on May 21.

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